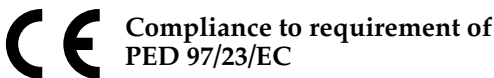


all stainless steel construction

MGS18 - DS 63

1.18



Compliance to requirement of
PED 97/23/EC

These instruments are designed for use in food, beverage, pharmaceutical, cryogenic, chemical and petrochemical processing industries, and in conventional and nuclear power plants, to measure gaseous or liquid media which do not have high viscosity or do not cristalize. They are built to resist the most severe operating conditions created by the ambient environment and the process medium. For use on power units, pumps, hydro-cleaning machines, presses, engine compressors, turbines, diesel engines, chemical, petrochemical and refrigerating plants and on machines and equipment where pulsating pressures or mechanical vibrations are apparent, the liquid-filled version is recommended.

Functional and constructive characteristics.

1.18.1 Standard

Accuracy class: 1,6 as per EN 837-1.
Ambient temperature: -25...+65 °C.
Process temperature: max +100 °C.
Working pressure: max 75% of the full scale value .
Over pressure limit: (referred to the full scale value):
 25% for pressure ranges ≤ 100 bar;
 15% for pressure ranges > 100 bar.
Protection: IP 55 as per IEC 529.
Socket material: AISI 316 st.st.
Elastic element: seamless tube
 AISI 316L st.st. "C" shaped for pressure ranges ≤ 40 bar;
 AISI 316L st.st. spiral for pressure ranges 60...1000 bar.
Welding: AISI 316 TIG.
Case: AISI 304 st.st.
Ring: AISI 304 st.st., bayonet lock.
Window: Plexiglas.
Movement: stainless steel.
Dial: ABS, white with black markings.
Special dials: ranges different from standard, or custom artwork,
 available on request.
Pointer: aluminium, micrometric adjustable.
Gasket: silicon rubber.
Blow out vent: EPDM.

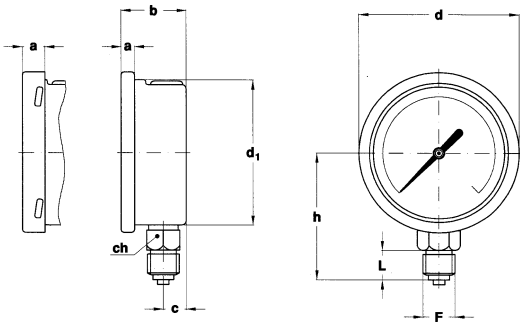
1.18.2 Fillable

Protection: IP 67 as per IEC 529.
Ring: AISI 304 st.st. polished, crimped.
Pointer: aluminium, black.
Note: version suitable for glycerine filling; other filling fluids
 available on request (see OPTIONS table) .
Other features: as type 1.18.1 (as type 1.18.3 when filled).

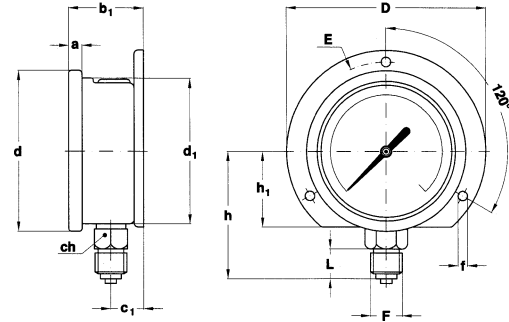
1.18.3 Liquid filled

Ambient temperature: max +65 °C, (see DAMPING LIQUIDS
 table for further information)
Process temperature: max +65 °C.
Protection: IP 67 as per IEC 529.
Ring: AISI 304 st.st. polished, crimped.
Pointer: aluminium, black.
Damping liquids: glycerine 98% (optional silicon oil, Fluorolube).
Other features: as type 1.18.1.

TYPE, DIMENSIONS AND WEIGHTS

**TYPE A**

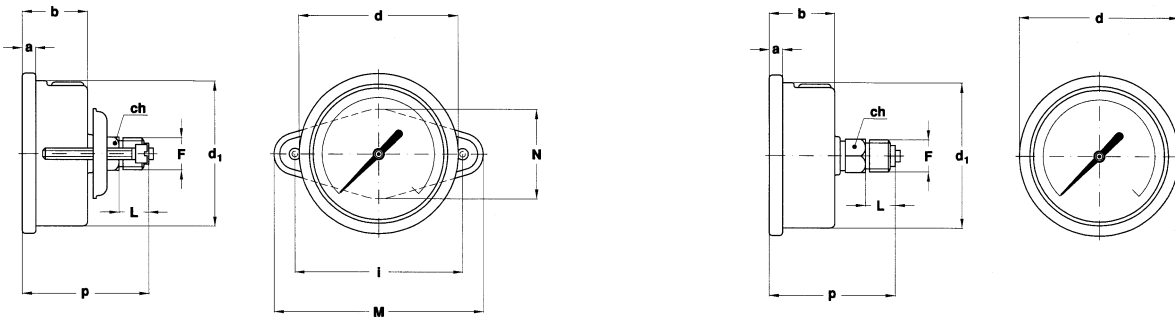
stem mounting;
lower connection.

**TYPE C**

surface mounting, back flange;
lower connection.

MODEL	DS	TYPE	a	b	b ₁	c	c ₁	d	d ₁	f	h ₁	D	E	Weight (kg)
1.18.1 (standard)	63	A-C	9,5	28	32	10	14	68	62,6	3,6	32	85	75	0,13-0,17
1.18.2 (fillable)	63	A-C	5,6	28	32	10	14	68	62,6	3,6	32	85	75	0,13-0,17
1.18.3 (filled)	63	A-C	5,6	28	32	10	14	68	62,6	3,6	32	85	75	0,2-0,24

(dimensions : mm.)

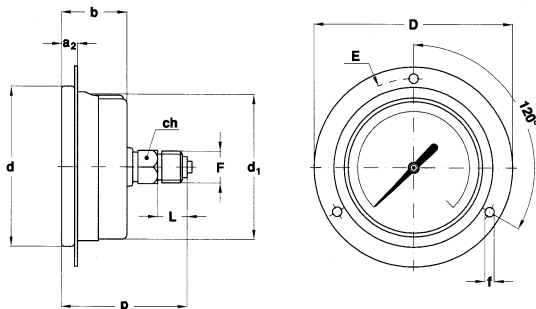


TYPE B - applicable on 01.18.2 and 01.18.3
flush mounting, "U"-Clamp;
back connection.

TYPE D
stem mounting;
back connection.

MODEL	DS	TYPE	a	a ₂	b	d	d ₁	f	i	D	E	M	N	Weight (kg)
1.18.1 (standard)	63	D	9,5	10,5	28	68	62,6							0,14
1.18.2 (fillable)	63	B-D-E	5,6	6,6	28	68	62,6	3,6	72	85	75	90	38	0,18-0,14-0,17
1.18.3 (filled)	63	B-D-E	5,6	6,6	28	68	62,6	3,6	72	85	75	90	38	0,25-0,21-0,24

(dimensions : mm.)



F	CODE	L	ch	h	p
1/8" BSP	11M	10	14 x 10	53,3	52,8
1/8" NPT	13M	10	14 x 10	53,3	52,8
1/4" BSP	21M	13	14 x 9	55,3	54,8
1/4" NPT	23M	13	14 x 8	54,3	53,8
1/4" BSP tapered	22M	13	14 x 8	54,3	53,8

(dimensions : mm.)

TYPE E - applicable on 1.18.2 and 1.18.3
flush mounting, front flange;
back connection.

DAMPING LIQUIDS

Damping liquids	Limit ambient temperature
Glycerine 98%	+15...+65 °C (+60...+150 °F)
Silicon oil	-45...+65 °C (-50...+150 °F)
"Fluorolube"	-60...+65 °C (-76...+150 °F)

Glycerine or silicone should not be used with highly oxidizing agents such as oxygen, chlorine, nitric acid or hydrogen peroxide, because of danger of spontaneous chemical reaction, inflammability or explosion. The use of fluorinated fluid is recommended in these cases.

RANGES

PRESSURE

TAB. 1

RANGE	bar	kPa	MPa	bar ext. psi int.	bar ext. kPa int.	bar ext. MPa int.
0...1	♦		♦	♦	♦	
0...1,6	♦		♦	♦	♦	
0...2,5	♦		♦	♦	♦	
0...4	♦		♦	♦	♦	
0...6	♦		♦	♦	♦	
0...10	♦		♦			♦
0...16	♦		♦			♦
0...25	♦		♦			♦
0...40	♦		♦			♦
0...60	♦		♦			♦
0...100	♦	♦	♦			♦
0...160	♦	♦		♦		♦
0...250	♦	♦		♦		♦
0...300	♦			♦		
0...400	♦	♦		♦		♦
0...600	♦	♦		♦		♦
0...1000	♦	♦		♦		♦
0...1600		♦				
0...2500		♦				

TAB. 2

RANGE	psi	psi int. kPa ext.	psi ext. bar int.	psi ext. kg/cm ² int.
0...15	♦	♦	♦	♦
0...30	♦	♦	♦	♦
0...60	♦	♦	♦	♦
0...100	♦	♦	♦	♦
0...160	♦	♦	♦	♦
0...200	♦	♦	♦	♦
0...300	♦	♦	♦	♦
0...400	♦	♦	♦	♦
0...600	♦	♦	♦	♦
0...1000	♦	♦	♦	♦
0...1500	♦	♦	♦	♦
0...2000	♦	♦	♦	♦
0...3000	♦	♦	♦	♦
0...4000	♦	♦	♦	♦
0...5000	♦	♦	♦	♦
0...6000	♦	♦	♦	♦
0...10000	♦	♦	♦	♦
0...15000	♦	♦	♦	♦

VACUUM & COMPOUND

TAB. 3

RANGE	bar	kPa	bar ext. psi int.*	bar ext. kPa int.
-1...0	♦		♦	♦
-1...0,6	♦		♦	♦
-1...1,5	♦		♦	♦
-1...3	♦		♦	♦
-1...5	♦		♦	♦
-1...9	♦		♦	♦
-1...15	♦		♦	♦
-1...24	♦		♦	♦
-100...0		♦		
-100...150		♦		
-100...300		♦		
-100...500		♦		
-100...900		♦		
-100...1500		♦		

* vacuum unit of measurement: "inHg"

TAB. 4

RANGE	psi*	psi int.* kPa ext.	psi ext.* bar int.	psi ext.* kg/cm ² int.
-30...0	♦	♦	♦	♦
-30...15	♦	♦	♦	♦
-30...30	♦	♦	♦	♦
-30...150	♦		♦	

* vacuum unit of measurement: "inHg"

OPTIONS

Description	Code	1.18.1	1.18.2	1.18.3
N1 version - Cu alloy tube and socket for pressure ranges ≤ 400 bar (3)	E01	◆		
"Fluorolube" filling (4)	F30			◆
DIN pointer (not adjustable)	L05	◆	◆	◆
Reference pointer "MN7"	L30	◆		
Polished flange type "E"	LU1		◆	◆
Brass movement MP2N	M01	◆	◆	◆
Suitable for filling with silicone and "Fluorolube" (4)	P01		◆	
Oxygen service	P02	◆	◆ (2)	◆ (1)
Aluminium dial (3)	Q03	◆	◆	◆
Black dial (3)	Q04	◆	◆	◆
AISI 304 st.st. restrictor $\varnothing 0,7$ mm.	S02	◆	◆	◆
Silicone oil filling (4)	S10			◆
Glass window	T30	◆	◆	◆
Safety glass window	T32	◆		

(1) to be ordered with "Fluorolube" filling only (option F30).

(2) to be ordered with option "P01".

(3) minimum quantity N. 100.

(4) window gasket: silicone rubber; blow out vent: VITON.

HOW TO ORDER
CODES & DESCRIPTION

1	1- bourdon tube pressure gauges
18	18 - al stainless steel construction MGS18
2	1 - standard version 2 - fillable version 3 - filled version
C	A - lower connection - stem mounting B - back connection - flush mounting, "U"-clamp C - lower connection - surface mounting, back flange D - back connection - stem mounting E - back connection - flush mounting, front flange
C	C - DS 63
2	1 - up to 2,5 bar 2 - from 4 to 40 bar 3 - over 40 bar
0/10 bar	see ranges table
21M	11M - 1/8" BSP 13M - 1/8" NPT 21M - 1/4" BSP 23M - 1/4" NPT 22M - 1/4" BSP tapered
21M	see options table

ACCESSORIES

Diaphragm seals: a complete range of diaphragm seals are available with a choice of materials of construction. Specifically for corrosive and difficult process fluids plus hygienic applications. For further details refer to relevant data sheets.

Adjustable over-load protector: this is useful for installations which may generate high overpressures; the pressure gauges is automatically excluded at the pre-set pressure and cut in again automatically when the operating pressure returns to normal. For further details refer to relevant data sheet.

Valves: for construction details and for use limits refer to relevant data sheet.

Pigtail and siphons: recommended with temperatures of 65° C (150° F) or over. For further details refer to relevant data sheet.

Pressure snubbers: for further details refer to relevant data sheet.